		INIVIA I HIN INICI II ACCIN	DE COTT		0256003	DAA	10	/015,954	
		RMATION DISCLOSUI (Use several sheets if neces	er of the life in		Applicant(s) T. Rappaport et a	al al			
	•			CSA	Filing Date		Group Art Unit		
·			JUN 1 0 2000	J CE	12/17	/01		3	
· · · · ·					ENT DOCUMENTS		<u> </u>		
*EXAMINER	REF	DOCUMENT NUMBER	TA IRADEM	%				-	
INITIAL		4,675,147			NAME	CLASS	SUBCLASS	FILE IF APP	NG DATE ROPRIATE
			6-23-87	Schaefe				4-6-83	
		4,736,453	4-5-88	Schloem				12-10-8	85
. 3		4,885,694	12-5-89	Pray et	al.			4-29-87	7
4		5,111,392	5-5-92	Malin				6-9-89	
5		5,119,307	6-2-92	Blaha et	al.			12-22-8	39
6		5,239,487	8-24-93	Horejsi (et al.		†	10-24-9	 00
7		5,293,640	3-8-94	Gunmar	et al.				
8		5,307,261	4-26-94	Maki et	al.			6-28-91	
9		5,337,149	8-9-94	Kozah et	al.			11-12-9	
10		5,339,184	8-16-94	Tang				6-15-92	
11		5,375,123	12-20-94	Andersso	n et al.				
<u>-</u>					PATENT DOCUMENT			2-5-93	-
k	EF	DOCUMENT NUMBER		T			· · · · · · · · · · · · · · · · · · ·	·	
		NJERNIT TOUR	DATE		COUNTRY	CLASS	SUBCLASS	YES YES	NO
		and the first state of the stat							
	_								
				·					
				OTHER DO	CUMENTS (Includia	ng Author, Title, Dat	e, Pertinent Paye	s. Etc.)	
				*******					······································
				······································					
		-	-						
AMINED	<u></u>				·				
AMINER				D.	ATE CONSIDERED				
				ŧ					

02560039AA

Application Number

Form PTO-A820 (also form PTO-1449)

P09A/REV04

Patent and Trademark Office * U.S. DEPARTMENT OF COMMERCE

	INFO	PRMATION DISCLOSUI	RE CHATION		Docket Number (Optional) 02560039A Applicant(s)		Application Number 10	er /015,954	
		(Use several sheets if neces		<u>}</u>	T. Rappaport et al.				;
			JUN 1 0 2003	(034	Filing Date 12/17/01		Group Art Unit		
				3	ENT DOCUMENTS				
EXAMINER INITIAL	REF	DOCUMENT NUMBER	RADEMIN		NAME	CLASS	SUBCLASS		C DATE COPRIATE
	12	5,394,522	2-28-95	Sanche	z-Frank et al.			9-13-93	
	13	5,450,615	9-12-95	Fortune	et al.	<u>.</u>		12-22-9	3
	14	5,458,123	10-17-95	Unger				4-29-94	
	15	5,465,390	11-7-95	Cohen				2-12-93	
	16	5,482,050	1-9-96	Smokof	f et al.			2-17-94	
	17	5,485,568	1-16-96	Venable	et al.			10-8-93	
	18	5,491,644	2-13-96	Pickerir	ıg et al.		·	9-7-93	
	19	5,491,837	2-13-96	Haartse	n .			3-7-94	
	20	5,493,679	2-20-96	Virgil et	al.			10-29-9.	3
. 2	21	5,515,269	5-7-96	Willis et	al.			11-8-93	
]2	22	5,528,518	6-18-96	Bradsha	w et al.			10-25-9:	4
				FOREIGN	PATENT DOCUMENTS				The Community of Street, and S
	REF	DOCUMENT NUMBER	DATE		COUNTRY	CLASS	SURCLASS	Trans YES	latinn NO

		-							
	<u> </u>		·	OTHER D	OCUMENTS (Including)	Author, Title, Da	te, Pertinent Pag	es, Etc.)	
		·							
									
	3		_				,		
AMINER					DATE CONSIDERED				
AMINER: sidered. In	Initial :	if citation considered, whether o copy of this form with next comm	r not citation is in con	iformance v	vith MPEP Section 609; Dra	w line through c	itation if not in c	onformance	and not

Form PTO-A820 (also form PTO-1449) P09A/REV04

Patent and Trademark Office * U.S. DEPARTMENT OF COMMERCE

(Use several sheets if necessar) T. Rappaport et al. JUN 1 0 2003 Filing Date Group Art Unit 12/17/01 S. PATENT DOCUMENTS EXAMINER REF DOCUMENT NUMBER DATE INITIAL NAME CLASS SUBCLASS FILING DATE IF APPROPRIATE 23 5,539,665 7-23-96 Lamming et al. 7-25-94 5,553,312 9-3-96 Gattey et al. 6-20-94 25 5,553,620 9-10-96 Snider et al. 5-2-95 26 5.555,354 9-10-96 Strasnick et al. 3-23-93 27 5,561,841 10-1-96 Markus 28 5,564,070 10-8-96 Want et al. 7-30-93 29 5.594,946 1-14-97 Menich et al. 2-28-95 5,598,532 1-28-97 Liron 10-21-93 31 5,625,827 4-29-97 Krause et al. 12-23-94 32 5,636,344 6-3-97 Lewis 8-22-91 33 5,689,355 11-18-97 Okubo et al. 7-1-96 FOREIGN PATENT DOCUMENTS REF DOCUMENT NUMBER DATE COUNTRY Translation CLASS SUBCLASS YES OTHER DOCUMENTS (Including Author, Title, Date, Pertinent Pages, Etc.) EXAMINER DATE CONSIDERED EXAMINER: Initial if citation considered, whether or not citation is in conformance with MPEP Section 609; Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

Docket Number (Optional)

Applicant(s)

INFORMATION DISCLOSURE CANTO

02560039AA

Application Number

10/015,954

Form PTO-A820 (also form PTO-1449)

,	INFO	DRMATION DISCLOSU	SEAT THE		0256003	39AA	10	/015,954	
		(Use several sheets if nece.	sspry)	છી .	Applicant(s) T. Rappaport et a	al.		۸.	
		ORMATION DISCLOSUS (Use several sheets if nece.	JUN 1 0 2003	4)	Filing Date		Group Art Unit		
				<i>[-1</i>	12/17/	/01			
	т		THE TRADEMA	U.S. PAT	ENT DOCUMENTS				
*EXAMINER INITIAL	REF	DOCUMENT NUMBER	DATE		NAME	CLASS	SUBCLASS		IG DATE ROPRIATE
	34	5,761,093	6-2-98	Urbish	et al.		·	5-8-97	NA N
	35	5,794,128	8-11-98	Brockel	et al.			9-20-95	
	36	5,799,154	8-25-98	Kuriyar				6-27-96	
	37	5,809,282	8-15-98	Cooper	et al			6-7-95	
	38	5,815,395	9-29-98	Hart et	al.			6-29-95	
	39	5,828,960	10-27-98	Tang et	al.			3-31-95	
	10	5,831,610	11-3-98	Tonelli d	et al.			2-23-96	· · · · · · · · · · · · · · · · · · ·
	41	5,832,389	11-3-98	Dent				4-3-96	
	42	5,861,887	1-19-99	Butler e	al.			12-5-95	
	43	5,867,112	2-2-99	Kost				5-14-91	
	44	5,877,777	3-2-99	Colwell				4-7-97	
				FOREIGN	PATENT DOCUMENT	rs	The state of the s		······································
	REF	DOCUMENT NUMBER	DVAE		COUNTRY	CLASS	SUBCLASS		dation
								VES	No
									·
								· ·	
	·L			OTHER DO	OCUMENTS (Include	Grant all mid n			
				,	unctua	ing Author, Title, Dat	e, Perunent Page	es, Etc.)	
								•	
	-					· · · · · · · · · · · · · · · · · · ·			
XAMINER				I	OATE CONSIDERED				
XAMINER	: Initial	if citation considered, whether o	n not altation to to		AL MEDER				

Application Number

Form PTO-A820 (also form PTO-1449)

considered. Include copy of this form with next communication to applicant.

P09A/REV04

Patent and Trademark Office * U.S. DEPARTMENT OF COMMERCE

INFORMATION DISCLOSURE 10/015,954 Applicant(s) (Use several sheets if necessary) T. Rappaport et al. JUH 1 0 2003 Filing Date **Group Art Unit** 12/17/01 I.S. PATENT DOCUMENTS EXAMINER DOCUMENT NUMBER INITIAL NAME CLASS SUBCLASS FILING DATE IF APPROPRIATE 45 5,878,328 3-2-99 Chawla et al. 12-21-95 46 5,907,850 5-25-99 Krause et al. 1-21-97 47 5,917,808 6-29-99 Kosbab 1-17-97 48 5,923,850 7-13-99 Barroux 6-28-96 49 5,926,762 7-20-99 Arpee et al. 5-17-96 58 5,940,196 8-17-99 Piehler et al. 5-16-97 51 5,945,976 8-31-99 Iwamura et al. 12-10-96 52 5,948,055 9-7-99 Pulsipher et al. 8-29-96 53 5,949,335 9-7-99 Maynard 4-14-98 5,949,988 9-7-99 Feisullin et al. 4-3-97 5.5 5.953,669 9-14-99 Stratis et al. 12-11-97 FOREIGN PATENT DOCUMENTS REF DOCUMENT NUMBER DATE COUNTRY Translation CLASS SUBCLASS YES OTHER DOCUMENTS (Including Author, Title, Date, Pertinent Pages, Etc.) EXAMINER DATE CONSIDERED EXAMINER: Initial if citation considered, whether or not citation is in conformance with MPEP Section 609; Draw line through citation if not in conformance and not

Docket Number (Optional)

02560039AA

Application Number

Form PTO-A820 (also form PTO-1449)

considered. Include copy of this form with next communication to applicant.

P09A/REV04

Patent and Trademark Office * U.S. DEPARTMENT OF COMMERCE

	INFO	ORMATION DISCLOSUI	PE		02560039A	<u> </u>	10	/015,954	
		(Use several sheets if neces			Applicant(s) T. Rappaport et al.				<u> </u>
			JUN 1 0 201	E A E	Filing Date 12/17/01		Group Art Unit		
			THE TRADE	O.S. PATI	ENT DOCUMENTS				
EXAMINER INITIAL	REF	DOCUMENT NUMBER	DATE		NAME	CLASS	SUBCLASS		G DATE
	56	5,963,867	10-5-99	Reynold	ls et al.			8-16-95	ROPRIATE
	57	5,970,406	10-19-99	Komara				12-31-9	96
	58	5,987,328	11-16-99	Ephrem	ides et al.	<u> </u>		4-24-97	7
	59	6,006,021	12-21-99	Tognazz	ini			7-1-96	
	60	6,018,625	1-25-00	Hayball	et al.			8-27-97	
	61	6,021,316	2-1-00	Heiska e	et al.				
	62	6,032,105	2-29-00	Lee et al	•			7-31-97	
	ស	6,038,547	3-14-00	Casto			<u> </u>	1-7-98	
	64	6,044,273	3-28-00	Tekinay		ļ		12-10-9	6
	65	6,058,102	5-2-00	Drysdale	et al			11-6-98	
	66	6,058,262	5-2-00	Kawas e	t al.			4-18-97	
			- L-	FOREIGN	PATENT DOCUMENTS		<u> </u>	······································	
	REF	DOCUMENT NUMBER	DATE		COUNTRY	CLASS	SUBCLASS	fran	slation
								YES	NO
	_			<u> </u>					
L				OTHERDO	OCUMENTS (Including 4				
	\top			OTHERDO	COMENTS (Including A	uthor, Tule, Dai	e, Pertinent Page	s, Etc.)	
							,		
				,	· · · · · · · · · · · · · · · · · · ·			· —————	· · · · · · · · · · · · · · · · · · ·
AMINER				l n	PATE CONSIDERED				
									
MILNER: sidered. I	initial nclude o	if citation considered, whether of copy of this form with next comm	r not citation is in co nunication to applica	onformance w ant.	ith MPEP Section 609; Draw	line through ci	tation if not in co	nformance	and not

02560039AA

Application Number

Form PTO-A820 (also form PTO-1449)

P09A/REV04

Docket Number (Optional) Application Number 02560039AA 10/015,954 INFORMATION DISCLOSURE Applicant(s) (Use several sheets if necessary) JUN 1 0 2003 T. Rappaport et al. Filing Date **Group Art Unit** 12/17/01 U.S. PATENT DOCUMENTS EXAMINER REF DOCUMENT NUMBER DATE INITIAL NAME CLASS FILING DATE **SUBCLASS** IF APPROPRIATE 67 6,059,842 5-9-00 Dumarot et al. 4-14-98 68 6,061,722 5-9-00 Lipa et al. 12-23-96 69 6,075,541 6-13-00 Maclinovsky 11-7-97 6,088,522 7-11-00 Lee et al. 7-31-97 71 6,104,699 8-15-00 Holender et al. 72 6,108,309 8-22-00 Cohoe et al. 12-8-97 73 6,111,857 8-29-00 Soliman et al. 9-11-97 74 6,122,083 9-19-00 Ohta et al. 10-3-94 75 6,148,010 11-14-00 Sutton et al. 6-24-98 6,199,032 3-6-01 Anderson 7-22-98 6,204,813 3-20-01 Wadell et al. 2-20-98 FOREIGN PATENT DOCUMENTS REF DOCUMENT NUMBER DATE COUNTRY CLASS SUBCLASS YES NO OTHER DOCUMENTS (Including Author, Title, Date, Pertinent Pages, Etc.)

EXAMINER

DATE CONSIDERED

EXAMINER: Initial if citation considered, whether or not citation is in conformance with MPEP Section 609; Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

INFORMATION DISCLOSURE & JUN 1 0 2003 (Use several sheets if necessary)

Docket Number (Optional) 02560039AA

Application Number 10/015,954

Applicant(s)

T. Rappaport et al.

Filing Date 12/17/01

Group Art Unit

S. PATENT DOCUMENTS

*EXAMINER INITIAL	REF	DOCUMENT NUMBER	DATE	NAME	CLASS	SUBCLASS	FILING DATE
	78	6,208,833	3-27-01	Preschutti et al.		300012433	IFAPPROPRIATE
	<u></u> -		3-27-01	Freschutti et al.			6-24-97
· / · · · · · · · · · · · · · · · · · ·	79	6,229,540	5-8-01	Tonelli et al.			10-13-98
	80	6,253,086	6-26-01	Parantainen et al.			3-25-99
	81	6,285,377	9-4-01	Greenbaum et al.			6-26-97
	82	6,289,203	9-11-01	Smith et al.			2-25-98
	83	6,317,599	11-13-01	Rappaport et al.			5-26-99
	84	6,326,987	12-4-01	Alexander			12-19-00
	35	6,330,005	12-11-01	Tonelli et al.			10-6-99
8	36	6,311,144	10-30-01	Abu El Ata			7-31-98
8	17	6,337,688	1-8-02	Berstis			1-29-99
8	8	6,338,031	1-8-02	Lee et al.			9-23-99

FOREIGN PATENT DOCUMENTS

ranslation
50
<u> </u>

OTHER DOCUMENTS (Including Author, Title, Date, Pertinent Pages, Etc.)

EXAMINER

DATE CONSIDERED

EXAMINER: Initial if citation considered, whether or not citation is in conformance with MPEP Section 609; Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

. •	INF(ORMATION DISCLOSURI	CITATION' JUN 1 0 2003	C34	Docket Number (Optional) 02560039A Applicant(s) T. Rappaport et al.	Α	Application Numb	er /015,954
			a	E/	Filing Date 12/17/01		Group Art Unit	
*EXAMINER	·		TRADENA	U.S. PA	TENT DOCUMENTS			
INITIAL	REF	DOCUMENT NUMBER	DATE		NAME	CLASS	SUBCLASS	FILING DATE
	89	6,356,758	3-12-02	Almeio	la et al.			12-31-97
	90	6,393,432	5-21-02	Flansb	urg et al,			6-2-99
	91	6,408,312	6-18-02	Forthn	nan et al.			8-30-99
	92	6,442,507	8-27-02	Skidmo	ore et al.			12-29-98
	93	6,470,195	10-22-02	Meyer				10-31-00
	94	6,487,417	11-26-02	Rosson	i et al.			11-24-99
	95	6,493,679	12-10-02	Rappar	port et al.			5-26-99
	96	6,496,290	12-17-02	Lee			-	12-17-98
	97	6,499,006	12-24-02	Rappap	oort et al.			7-14-99
ç	98	6,505,045	1-7-03	Hills et	al.			4-10-00
	19	5,586,254	12-17-96	Kondo				
				FOREIG:	N PATENT DOCUMENTS			and the second s
	REF	DOCUMENT NUMBER	DATE		COUNTRY	CLASS	SUBCLASS	Franslation
								YES NO
							-	
						 		
			<u>-</u> 1	OTHER D	OCUMENTS (Including)	Author, Title. Do	ite, Pertinent Page	rs Ftc.)

EXAMINER

DATE CONSIDERED

EXAMINER: Initial if citation considered, whether or not citation is in conformance with MPEP Section 609; Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

	INF	ORMATION DISCLOSU	RE CHATIBI	VE	02560039A	A	Application Nur	ober 10/015,954
		(Use several sheets if nece	JUN 1	2003 4 30	T. Rappaport et al.	· 	1000	,- 2
					12/17/01		Group Art Unit	
			PATE	PATE	INT DOCUMENTS			
*EXAMINER INTIAL	REF	DOCUMENT NUMBER	DATE	1000	NAME			
	100	6,085,33.5	7-4-00	Djoko et		CLASS	SUBCLASS	FILING D.
	101	5,710,758	1-20-98					12-31-97
	102	5,821,937	- 	Soliman				9-29-95
	.103	5,774,669	10-13-98	Tonelli e	tal.			8-12-96
	104		6-30-98	George e	l al.			7-28-95
		5,802,146	9-1-98	Dulman				11-22-95
	105	5,825,759	10-20-98	Liu			 	7-24-95
	06	5,845,124	12-1-98	Berman				5-1-96
10))	6,199,032	3-6-01	Anderson				
11	0	5,467,441	11-14-95	Stone et al				7-22-98
11	1	6,243,772	6-5-01	Ghori et a		***************************************		
111	2	5,994,984	11-30-99	Stancil et :	 al.			1-31-97
				;		,	!	5-29-98
k:	£7F	CONTRACT STABLE	DATE		COUNTRY	71.15	Z. DY LA	100 mm
			read and to a dear a production of the second					VES 3
		The state of the s	Annual Property and a second published and a					
		The statement will be supplied the same the state to be stated to be s		THE STATE OF THE STATE OF THE STATE OF				
	-							
	1							
L								
	Γ			OTHER DOCL	MENTS (Including Aut)	or. Title, Date,	Pertinent Pages.	Etc.)
	i						* **** ** ******	***************************************
	-1							
	2							
IINER				DAT	E CONSIDERED			

HARD. P	ial if a	itation considered, whether or no y of this form with next commun						

----- (Ohtiousi)

SHEET 10 OF 15

INF	ORMATION DISCLOSUF (Use several sheets if neces	RE CITATION Sary) JUN 10	AUG. S.	Docket Number (Optional) 02560039 Applicant(s) T. Rappaport et al.	AA		oer 0/015,954	
			\$	Filing Date 12/17/01		Group Art Unit		
		TRAI	O.S. PAT	ENT DOCUMENTS				
NER REF		DATE		NAME	CLASS	SUBCLASS		NG DATE ROPRIAT
113	5,977,851	11-2-99	Stancil	et al.		Cal	11-13-	7
114	5,755,072	5-26-98	Lingafe	lter			5-13-9	8
_								
					·			
	·							
								···
			FOREIGN	PATENT DOCUMENTS				
REF	DOCUMENT NUMBER	DATE		COUNTRY	CLASS	SUBCLASS	Tran YES	slation NO
ļ					-			
-								
								
	From Bird's Eye Real-ti		OTHER DO		Author, Title, Dat	e, Pertinent Page	25, Etc.)	

EXAMINER

DATE CONSIDERED

IEEE Transactions on Antennas and propagation, Vol. 46, No. 8, August 1998. " Effect of Terrrain on Path Loss in Urban Enviroments for Wireless Applications" Leonard Piazzi and Henry L. Bertoni

EXAMINER: Initial if citation considered, whether or not citation is in conformance with MPEP Section 609; Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

· TM	FORM	MATION DISCLOSURE CI	TAGON 5.	02500039AA	10/015,954
		(Use several sheets if necessary)	()	Applicant(s) T. Rappaport et al.	
			JUN 1 0 2003 \$	Filing Date	Group Art Unit
*EXAMINER	Ť		\3 E	12/17/01	
INITIAL		OTHER DOCUMENTS	TRADE TRADE	le, Date, Pertinent Pages, Etc.)	
		P. Bahl, V. Padmanabhan,	and A. Balachandran,	"A Software System for Locati	ng Mobile Users: Design, Evaluation
	1	interessit rectifi	icai Kepui i, April 200	Ų	- so ga, evaluation
	1.				* * * * * * * * * * * * * * * * * * *
		G. Durgin, T.S. Rappaport,	H. Xu, Measurements	s and Models for Radio Path Lo	ss and Penetration Loss in and Arou
	2	riomes and Trees at 5.85 G	Hz," IEEE Transactio	s and Models for Radio Path Lo ns on Communications, vol. 46,	no. 11, November 1998.
		C.M. Peter Ho et al., "Anter	nna Effects on Indoor	Obstructed Wireless Channels	and a Deterministic Image-Based
	3	Information Networks, Vol.	1, No. 1, 1994.	· ·	is, International Journal of Wireles
		S. Kim et al., "Radio Propag	gation Measurements	and Predictions Using Three-di	mensional Ray Tracing in Urban
	4	Environments at 900 MHZ :	ina 1.9 GHz," IEEE T	and Predictions Using Three-di Fransactions on Vehicular Techt	nology, vol. 48, no. 3, May 1999
		T.S., Rappaport et al., "Use	of Topographic Maps	with Building Information to F	Octermine Antenna Placements and C PRG Technical Report
	5	MPRG-TR-95-14, Virginia T	Detection and Tracking tech, September 1995	ng in Urban Environments," Mi	PRG Technical Report
		R.K. Morrow, Jr. and T.S. R	Sappaport, "Getting It	n," Wireless Review Magazine,	March 2000
	6			, and the state of	Maich 2008,
	U				•
		Wireless Valley Communicat	tions, Inc., "SitePlann	er 3.16 for Windows 95/98/NT 1	Jser's Manual," Software User's Ma
	7	pp. 3-146 to 3-136, 1999.			sor's Standar, Souware User's Ma
:					
		M. Panjwani et al., "Interact	ive Computation of Co	overage Regions for Wireless Co	ommunication in Multifloored instead
	8	Environments," LEER Journ	al on Selected Areas in	overage Regions for Wireless Confimunications, Vol. 14, No.	3, April 1996,
		•			
	-	L Piazzi and H.L. Bertoni, "A	Achievable Acurracy o	f Site-Specific Path-Loss Predic	ctions in Residential Environments" I
	,	Transactions on venicular 16	echnology, vol. 48, no.	3, May 1999.	,
		T.S. Rappaport et al., "Wirel	ess Communications:	Past Events and a Future Perso	ective", IEEE Communications
١,	. ' !0	Magazine, May 2002.	•		, in a second second
[. •				
		T,S. Rappaport et al., "Radio	Propagation Prediction	on Techniques and Computer-A	ided Channeling Modeling for
.	1	Embedded Wireless Microsys 1994.	tems," ARPA Annual	Report, MPRG Technical Repo	ided Channeling Modeling for ort MPRG-TR-94-12, Virginia Tech,
1	•				
		T.S., Rappaport et al., "Use o	f Topographic Mans	with Building Information to D.	etermine Antenna Placements for Ra
1	2	Detection and Tracking in Ur 1995	ban Environments," N	MPRG Technical Report MPRG	etermine Antenna Placements for Ra -TR-95-14, Virginia Tech, November
IINER			. 1	DATE CONSIDERED	
					:

Application Number

considered. Include copy of this form with next communication to applicant.

`	INFO	RMATION DISCUSSION OF THE	O2560039AA	Application Number
·		PRMATION DISCLOSURE CHATION (Use several sheets if necessary)	Applicant(s)	10/015,954
		JUN 1 0 2003 2	T. Rappaport et al.	
*EXAMI	NER	, i	12/17/01	Group Art Unit
INITI	1	OTHER DOCUMENTS Concluding And Tit	le, Date, Pertinent Pages Fro	
		D. Ullmo et al., "Wireless Propagation in Building Technology, Vol. 48, No. 3, May 1999.	gs: A Statistical Scattering Apr	roach." IEEE Transacti
	. 1	3		A ansactions on Vehi
<u>.</u>				
l		T.S. Rappapoprt, "wireless Communications: Prin	nciples and Practice" Second Ed	lition Prentice Hall 2000
1	14			2002.
			•	
		T.S Rappaport et al., "Use of Topographic Maps Satellite Coverage for Radio Detection and Trackit Virginia Tech, September 1995.	with Building Information to D	etermine Antenna Dla
	15	Satellite Coverage for Radio Detection and Trackit Virginia Tech, September 1995.	ng in Urban Environments," M	PRG Technical Report MPRG-TR-
		T C Pa		
		T.S. Rappaport et al., "Indoor Path Loss Measurer produced for Motorola, December 16, 1997.	ment for Homes and Apartment	s at 2.4 and 5.85 GHz " private rea
	16			· · · · · · · · · · · · · · · · · · ·
		T S Process to III		
		T.S. Rappaport, "Isolating Interference," Wireless	Review Magazine, May 2000.	American transfer of the second secon
	17			
		Slides from T.S. Pannas de d. P. Guide		
		Slides from T.S. Rappaport and R. Skidmore, "Intre Wireless Solutions Conference and Exposition, Febr	oduction to In-Building Wireles ruary 4, 2003.	s Systems, " Infocast In-Building
	118	•		
		S. Sandhu, M.P. Koushik, and T.S. Rappapart "Pro-	disast Control of the	
	: 19	S. Sandhu, M.P. Koushik, and T.S. Rappaport "Pred on Site Specific Propagation Prediction," MPRG Te	echnical Report MPRG-TR-94-2	First set of predictions for ORD Pro
_				o and receding 1774,
	****	S. Sandhu, M.P. Koushik, and T.S. Rappaport, "Pre	dicted Path Loss for P. L. W.	The second secon
	29	S. Sandhu, M.P. Koushik, and T.S. Rappaport, "Pre Project on Site Specific Propagation Prediction," All	PRG Technical Report MPRG	First set of predictions for ORD [R-94-20, Virginia Tech, March 19
** **				
	:	S. Seidel et al., "Site-Specific Propagation Prediction Transactions on Vehicular Technology, Vol. 43, No. 4	for Wireless In-Building Person	nal Cammunia di 1887, 170 minuti
	21	200 and 100 an	November 1994.	. TEFF
		S Chaldensi		
•		S. Shakkottai and T.S. Rappaport, "Research Challe Fifth International Symposium on Wireles Personal A	nges in Wireless Networks: A T	echnical Overview," Proceeding of
	22		Communications, H	onomia, HI, October 2002.
		H. Sherali et al. "On the Ontimit		
		H. Sherali et al., "On the Optimal Location of Transn IEEE Journal on Selected Areas in Communications,	nitters for Micro-cellular Radio Vol. Vol. 14, No. 3, pp. 662-673	Communication System Design,"
	23		7 - 100 m; pp. 002-073,	177(),
		R, Skidmorre et al. "A Comprehensive L. D. "		
	24	R. Skidmorre et al., "A Comprehensive In-Building an Bradley Department of Electrical Engineering, MPRO Master's Thesis - unpublished, MPRO	nd Microcellular Wireless Comi G-TR-97-13, June 1997.	nunication System Design Tool" Th
	24	Master's Thesis - unpublished by V	irginia Tech for 2 ye	ears after submission.
AMINER				
		DA'	TE CONSIDERED	
			•	

Docket Number (Optional)
02560039AA

Application Number

•			(alp)	Docket Number (Optional)	Application Number
LN.	FORM	IATION DISCLOSURE C	PETATION (02560039AA	10/015,954
		(Use several sheets if necessary)	/ ~\	Applicant(s) T. Rappaport et al.	
			_ JUN 1 0 2003 윷)	Filing Date	Group Art Unit
*EXAMINER	T			12/17/01	
INITIAL		OTHER DOCUMENT	S Analyging Andrea, Tur	e, Date, Pertinent Pages, Etc.)	
		R. Skidmore, et al., Russell "Project Undate " AoC Co	Senate Office Building	Propagation Study, Project	Report for Joseph R. Loring & Associate itect of the Capital, January 19, 1997.
	24	of the optime, Auc co	uti act # Acut 90000, pr	epared for Office of the Arch	itect of the Capital, January 19, 1997.
					0
Pro		R. Skidmore, et al., Russel	Senate Office Buildin	g Propagation Study, Project	Report for Joseph R. Loring & Associate
	25	Office Building (RSOB) an	the Proposed Enhancen d Associated Utility Tu	nents of the Wireless Commu	Report for Joseph R. Loring & Associate nications Environment of the Russell Sen
		of the Capitol, February 20), 1997.	The Contract # Acti	nications Environment of the Russell Sen 196088, prepared for Office of the Archit
	 	R. Torres et al., "CINDOO	R. An Engineering Too	l for Planning and D	
• .		IEEE Antennas and Propag	gation Magazine, Vol. 4	I, No. 4 August 1999.	Wireless Systems in Enclosed Spaces,"
	26				
	 	P Skidmon et al. II I-4			
•		Multi-Floored Indoor Envir	ctive Coverage Region : ronments: SMT Plus tm	and System Design Simulation, "IEEE ICUPC Proceedings	n for Wireless Communication Systems is s, 1996.
	27			,	, 1270.
· · · · · · · · · · · · · · · · · · ·				·	
		Ì			
		T.S. Rappaport et	al., "Radio Pr	opagation Predictio	n Techniques and Computer-
	; ; !	MPRG-TR-95-08, Vi	caring for pumped	ued Wireless Micros	n Techniques and Computer- ystems," MPRG Tech. Report
	1	1 LIE VO-TV-30-08 VI	rainia Took To		
			rgriita fecii, ou	Ly 1995.	
			rginia lech, ou	1y 1995.	
			ryinia lech, bu	1y 1995.	
			rginia fech, ou	1y 1995.	
			Tyrina Tech, Ju	1y 1995.	
			Tyrina recii, ou	1y 1995.	
			Tyrira recii, ou	1y 1995.	
			rginia recii, ou	1y 1995.	
				1y 1995.	
				19 1995.	
			· ·	IY 1995.	
				1y 1995.	
			·	iy 1995.	
				1y 1995.	
				1y 1995.	
				1y 1995.	
				19 1995.	
				TY 1995.	
				1y 1995.	
				Ty 1995.	
AMINER				DATE CONSIDERED	
AMINER				ıy laap.	

INFO	PMATION PROGRAMMO CONTRACTOR	Docket Number (Optional) 02560039AA	Application Number 10/015,954
ПАРОІ	RMATION DISCLOSURE CLAVION (Use several sheets if necessary)	Applicant(s) T. Rappaport et al.	
	See Door or Huu	Filing Date 12/17/01	Group Art Unit
*EXAMINER INITIAL	OTHER DOCUMENTS, (Including Auct), T	itle, Date, Pertinent Pages, Etc.)	
$\sim D$	Company Web Page "Actix" Com p	roduct name: E-NOS (now E-AMS)
	Company Web Page " Agilent' www.agilent.com	product name: OPAS32	
		• • • • • • • • • • • • • • • • • • •	
	Company Web Page " Agilent " www.agilent.com	n product name: Wizard	
	Company Web Page " Comarco" www.edx.com	product name: SignalPro	
	Company Web Page " ComOpt" www. comopt.c	om. product name: CellOpt AFP	
	Company Web Page " Lucent" www.bell-labs.com	m product name: WiSE	TECH
	Company Web Page " Ericsson" www.ericsson.co	om product name: TEMS Lite	RECEIVED JUN 11 2003
	Company Web Page "Ericsson" www.ericsson.c	om product name: TEMS	VED 2003 2003
	Company Web Page " Marconi" www.marconi.co	om product name: PlaNET	
	Company Web Page " Marconi" www.marconi.co	om product name: decibelPlanner	
	Company Web Page " Schema"www.schema.com	product name: Optimizer	
0,73	Company Web Page " ScoreBoard" www.scorebo	ard.com product name: ScoreBoard	
EXAMINER	of citation considered, whether or not citation is in conformance py of this form with next communication to applicant	DATE CONSIDERED /2/23/0	3

Docket Number (Optional) **Application Number** 02560039AA 10/015,954 INFORMATION DISCLOSURE CITATION Applicant(s) Rappaport et al. (Use several sheets if necessary) Filing Date Group Art Unit 12-17-01 2857 U.S. PATENT DOCUMENTS EXAMINER FILING DATE CLASS SUBCLASS REF DOCUMENT NUMBER DATE NAME IF APPROPRIATE AU6 2 0 2003 FOREIGN PATENT DOCUMENTS Translation COUNTRY CLASS SUBCLASS REF DOCUMENT NUMBER DATE YES NO OTHER DOCUMENTS (Including Author, Title, Date, Pertinent Pages, Etc.) Software by Andrew titled "RF Planner" dated 6-17-97 2. A user guide titled: "Andrew Microwave System Planner" dated 7-99 3. A user guide titled: "Andrew Antenna System Planner" dated 6-99 EXAMINER DATE CONSIDERED

EXAMINER: Initial if citation considered, whether or not citation is in conformance with MPEP

not considered. Include copy of this form with next communication to applicant.

Section 609; Draw line through citation if not in conformance and

O P & INFORMATION DISCLOSURE CITATION (Case several sheets if necessary)			Applicant(s) Rappaport et al.							
\ 	NOV 1 2 2003 gg			Filing Date 12-17-01	G	Group Art Unit 2857				
CNT &	TRADEN	ART	Į.	J.S. PATENT DOCUMENTS				<u> </u>		
*EXAMINER INITIAL	REF	DOCUMENT NUMBER	DATE	NAME	CLASS	SUBCLASS	FILING D IF APPROP			
				- L. M						
										
					-					
	-					REC	EIV	=D		
						NOV	1 7 200	13		
						Technolo	lov Cente	e r 2600		
						Todinioid	9) 00			
		· · · · · · · · · · · · · · · · · · ·								
				TODAY DATED TO CHARACTE	,		<u></u>			
	FO		FOREIGN PATENT DOCUMENTS		T	Transl	ation			
	REF	DOCUMENT NUMBER	DATE	COUNTRY	CLASS	SUBCLASS	YES	NO		
	<u> </u>		†	· · · · · · · · · · · · · · · · · · ·						
	-									
	<u></u>			OTHER DOCUMENTS (Including	ng Author, Title, I	Date, Pertinent P	ages, Etc.)			
		1. Article "Building Da		r" Copyright, January 1998; MI						
K	5			ms Management; T. Rappaport						
	<u>Y</u>		3. Propagator; Vol. 8, No. 3; Fall 1997.							
	77			ore & T. Rappaport; Copyright,	August 1996; V	irginia Tech				
EXAMIÑ	ER	Que No		DATE CONSIDERED	2/23	103				
EVAMIN	FR. In:	ial if citation considered, whether	or not citation is in	conformance with MPEP Section 609	9; Draw line thro	1	ot in conform	ance and		
not consid	iered. I	nclude copy of this form with next	t communication to a	pplicant.						
				DODA/DEV/04	Datast and Tradon	nark Office * U.S. Di	PARTMENT OF	COMMERCE		

Form PTO-A820 (also form PTO-1449)